

## CLAIMS

What is claimed is:

1. A method, comprising:  
programming, based on predefined data, one or more fields of configuration registers of a peripheral device in response to a configuration cycle of a data processing system, the one or more fields of the configuration registers including at least one identification register for identifying the peripheral device; and  
operating the peripheral device using at least one programmed identification register.
2. The method of claim 1, further comprising enabling the peripheral device in the data processing system after the programming, the peripheral device having an identification derived from the at least one identification register programmed with the predefined data.
3. The method of claim 2, further comprising verifying content of the one or more programmed registers against the predefined data before enabling the peripheral device.
4. The method of claim 2, wherein the peripheral device is a PCI (peripheral component interconnect) compatible device and the enabled peripheral device operates in compliance with a PCI specification.
5. The method of claim 1, further comprising retrieving the predefined data from a memory associated with the peripheral device prior to programming the peripheral device.

6. The method of claim 1, further comprising:
  - determining whether identification of the peripheral device needs to be programmed using the predefined data;
  - programming the at least one identification registers of the peripheral device using the predefined data, if the identification of the peripheral device needs to be programmed using the predefined data; and
  - loading the at least one identification registers using default data if the peripheral device's identification does not need to be programmed.
7. The method of claim 6, wherein whether the identification of the peripheral device needs to be programmed is determined based on one or more bit patterns of the predefined data.
8. The method of claim 1, wherein the at least one identification register includes at least one of vendor ID, device ID, and revision registers.
9. The method of claim 1, further comprising configuring the at least one identification register as a read only register after the peripheral device is enabled.
10. The method of claim 1, further comprising detecting a reset signal received at the peripheral device, programming the one or more fields of configuration registers of the peripheral device using the predefined data being automatically performed in response to the reset signal.
11. A machine-readable medium having executable code to cause a machine to perform a method for power management, the method comprising:

programming, based on predefined data, one or more fields of configuration registers of a peripheral device in response to a configuration cycle of a data processing system, the one or more fields of the configuration registers including at least one identification register for identifying the peripheral device; and operating the peripheral device using at least one programmed identification register.

12. The machine-readable medium of claim 11, wherein the method further comprises enabling the peripheral device in the data processing system after the programming, the peripheral device having an identification derived from the at least one identification register programmed with the predefined data.
13. The machine-readable medium of claim 12, wherein the method further comprises verifying content of the one or more programmed registers against the predefined data before enabling the peripheral device.
14. The machine-readable medium of claim 12, wherein the peripheral device is a PCI (peripheral component interconnect) compatible device and the enabled peripheral device operates in compliance with a PCI specification.
15. The machine-readable medium of claim 11, wherein the method further comprises retrieving the predefined data from a memory associated with the peripheral device prior to programming the peripheral device.
16. The machine-readable medium of claim 11, wherein the method further comprises:  
determining whether identification of the peripheral device needs to be programmed  
using the predefined data;

programming the at least one identification registers of the peripheral device using the predefined data, if the identification of the peripheral device needs to be programmed using the predefined data; and  
loading the at least one identification registers using default data if the peripheral device's identification does not need to be programmed.

17. The machine-readable medium of claim 16, wherein whether the identification of the peripheral device needs to be programmed is determined based on one or more bit patterns of the predefined data.
18. The machine-readable medium of claim 11, wherein the at least one identification register includes at least one of vendor ID, device ID, and revision registers.
19. The machine-readable medium of claim 11, wherein the method further comprises configuring the at least one identification register as a read only register after the peripheral device is enabled.
20. The machine-readable medium of claim 11, wherein the method further comprises detecting a reset signal received at the peripheral device, programming the one or more fields of configuration registers of the peripheral device using the predefined data being automatically performed in response to the reset signal.
21. A peripheral device, comprising:  
a processor to perform one or more peripheral functions;

one or more programmable configuration registers accessible by the processor, the one or more programmable configuration registers including at least one identification register for identifying the peripheral device; and a memory coupled to the processor to store predefined data, the predefined data being used to program the one or more programmable configuration registers including the at least one identification register in response to a configuration cycle of the peripheral device.

22. The peripheral device of claim 21, wherein the at least one identification register includes at least one of vendor ID, device ID, and revision registers.
23. The peripheral device of claim 21, wherein the memory is a serial read-only memory (SRAM).
24. A data processing system, comprising:
  - one or more processors;
  - a bus coupled to the one or more processors;
  - one or more peripheral devices coupled to the bus, at least one of the peripheral devices including
    - one or more functional units to perform one or more peripheral functions,
    - one or more programmable configuration registers including at least one identification register for identifying the respective peripheral device,
    - and
    - a memory to store predefined data, the predefined data being used to program the one or more programmable configuration registers including the at

least one identification register in response to a configuration cycle of the peripheral device.

25. The data processing system of claim 24, wherein the at least one identification register includes at least one of vendor ID, device ID, and revision registers.
26. The data processing system of claim 24, wherein the memory is a serial read-only memory (SRAM).
27. The data processing system of claim 24, wherein the one or more peripheral devices are PCI (peripheral component interconnect) compatible devices.